

Why renewable resources are important to us and to our customers



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Most of our customers are in the power generation or hydrocarbon processing industries, and many of them are seriously pursuing the concept of renewable resources. For example, the Chairman of the Board of a major international oil company recently promised investors that his company will not postpone projects in renewable energy. He made this promise, even though, at the time, his company was in a less favorable financial situation as a result of depressed oil prices and the economic slowdown in Asia. In addition to oil and gas, this company has clearly stated that other energy sources, renewable resources in particular, will be high on their list for investments.

In the future, this company expects alternate and renewable energy sources to make up a larger share of the company's business. This company expects renewable resources to provide between 5% and 10% of the world's energy within 25 years, and as much as 50% by 2050, depending on world energy scenarios.

This prominent company sees itself more broadly as an energy company, rather than simply an oil company. Other companies that have traditionally

seen themselves as electric companies or oil companies are similarly recognizing that they are energy companies, providing energy to customers, regardless of the source.

Opportunities for the profitable use of renewable energy sources abound. Although machinery will continue to be part of delivering the world's energy for many years, nonrenewable energy resources, such as fossil-based fuels, are declining. Bently Nevada and our customers are exploring innovative ways to be good stewards of the world's energy resources through the application of renewable resource methods.

"The amount of carbon dioxide in the world's atmosphere is increasing approximately 1% per year, due to the burning of hydrocarbon fuels."

Advantages of biomass & composting

One of my businesses, Bently Biodynamics, is researching biomass uses and has developed a composting system. Our goal is to work in harmony with nature's essential resources: air, water, sunlight, and soil. Biomass is plant material, either raw or processed, such as fast-growing trees and grasses, agricultural residues (rice straw, wheat straw, and corn stalks), and wood waste (sawdust and tree prunings).

Put another way, biomass is stored solar energy that can be converted to

electricity or fuel. Increased use of biomass for energy could help reduce greenhouse gas emissions and dependence on fossil fuels. More than any other energy resource, biomass can simultaneously address a nation's energy, environmental, and economic needs.

Fossil fuels remove carbon that is stored underground and transfer it to the atmosphere. In a combustion system, biomass also releases carbon dioxide as it burns; but biomass needs carbon dioxide to grow, therefore creating a closed carbon cycle. In this cycle, there is a net reduction of carbon dioxide. In addition, substantial quantities of carbon can be captured in the soil through biomass root structures, creating a net carbon sink that would help improve the soil and increase crop yields. **The amount of carbon dioxide in the world's atmosphere is increasing approximately 1% per year, due to the burning of hydrocarbon fuels. While this is a form of fertilizer, eventually, at some level, it will harm the atmosphere.**

These soil improvements can also decrease the amount of land needed to meet the market demand for food. The extra land could be used to grow biomass crops that would, in turn, restore soil carbon, reduce erosion and chemical runoff, and enhance wildlife habitat. Biomass crops are the same kinds of crops that we now plant to protect fragile land under the Conservation Reserve Program. This U.S. Government program allows farmers to remove farmland from agricultural

production for up to ten years and plant it with grass to preserve land for future generations. These crops can be harvested without damage to the root structure and, therefore, continue to serve as a soil stabilizer, stream buffer, and wildlife habitat. Last year, Bently

Biodynamics planted 50 acres of hybrid poplar trees and plans to plant additional acreage this spring.

Compost technology is a valuable tool being used to increase yields by farmers interested in sustainable agriculture. Several years ago, I consolidated my Nevada ranchlands, creating another business called Bently Agrowdynamics™. We started adding compost to soil, which substantially increased the yields and quality of the crops grown. A significant number of

professional growers are discovering that compost-enriched soil can also help suppress diseases and ward off pests. These beneficial uses of compost can save growers money, reduce their use of pesticides, and conserve natural resources. Compost-enriched soil can also reduce erosion and nutrient runoff, alleviate soil compaction, control disease and pest infestation in plants, reduce pollution, and provide bioremediation, a new compost technology.

Bioremediation

Bioremediation is the degradation or stabilization of contaminants by microorganisms, for instance, bacteria, fungi, actinomycetes, and cyanobacteria. Each year, agricultural effluents, industrial residues, and industrial accidents contaminate surface waters, soils,

air, streams, and reservoirs. Through bioremediation, Bently Biodynamics is able to restore contaminated soils, manage stormwater, control odors, and degrade volatile organic compounds.

Summary

Many of our customers are seeing themselves as “energy companies” with an interest in alternative energy sources rather than simply “oil companies” or “electricity companies.” Bently Nevada is likewise responding to the challenges of a future that relies more heavily on renewable resources. Through the efforts of Bently Agrowdynamics and Bently Biodynamics, we are working to achieve environmentally and economically sustainable agricultural systems that help counter the effects of traditional fossil-fuel combustion. [↪](#)

ANNOUNCEMENTS

New offices – Designed to promote team building

To better help you with all your service and support needs, Bently Nevada recently built new facilities for our Charlotte, North Carolina, and Baton Rouge, Louisiana, technical support centers. While these locations have been home to Bently Nevada regional sales and service personnel for many years, the new facilities' open floor plans enhance the ability of employees to interact with one another and work collaboratively. Large, multi-purpose classroom

facilities are a part of both buildings' designs. It allows us to move training closer to our customers while providing a professional and controlled learning environment. Both of these facilities have also been designed and insulated for optimum energy conservation and are virtually maintenance-free.

Bently Nevada currently has over 80 technical support centers worldwide to help you protect and manage all your machinery. [↪](#)



Charlotte, North Carolina.



Baton Rouge, Louisiana.